## 1.3. Module/ course form

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| To be completed by Course Team | Module name :  **Sustainable Development** | | | | | | | Module code: | | |
| Course name:  **Sustainable Development** | | | | | | | Course code: | | |
| Faculty:  **Institute of Technology** | | | | | | | | | |
| Field of study:  **Environmental engineering** | | | | | | | | | |
| Mode of study :  stationary | | | | Learning profile:  practical | | | Speciality: | | |
| Year/ semester: | | | | Module/ course status: | | | Module/ course language:  **English** | | |
| Type of classes | | lecture | lessons | | lab | project | | tutorial | other (please specify) |
| Course load | | **15** |  | |  |  | | **15** |  |
| **ECTS** | | **5** | | | | | | | | |

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| Module/ course coordinator | Dr Agata Rychter |
| Lecturer | Dr Agata Rychter |
| Module/ course objectives | Student should understand the basic concept of Sustainable Development (SD), the environmental-, social- and economic aspects. Know the history of the SD idea. Be able to discuss the conflicts which are involved in the SD (national and the global scale). Be able to discuss the disadvantages and advantages of instruments for SD.  Basic level.  ***The students will be awarded an international diploma issued by the Baltic University Programme at Uppsala University, Sweden****.* |
| Entry requirements |  |

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| **LEARNING OUTCOME** | | |
| Nr | LEARNING OUTCOME DESCRIPTION | Learning outcome reference |
| 1 | Student knows the basic concept of Sustainable Development. | P6S\_UU |
| 2 | Student knows some instruments for SD, international documents of environmental protection and some aspects of environmental policy. | P6S\_WK |
| 3 | Student uses English sufficiently to communicate, also in matters of professional and technical, can prepare and show a short presentation on the sustainable tasks. | P6S\_KK |

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| **CURRICULUM CONTENTS** |
| **Lecture** |
| Sustainable Development (SD) is defined as “development that meets the needs of the present without compromising the ability of future generations to meet their own needs” (Brundtland Report 1987). This intergenerational ethics was clearly spelled out by the World Commission in 1987. But it also asks for us living now to share resources in a just way.  The most critical resources for the survival of future generations are climate stability and biodiversity. Therefore, we have to respect the planetary boundaries of economic activity today. SD question is: How to improve the life of the poor without overburdening the ecosystems? This is a challenge for individual lifestyles , for companies and for government policy. The lecture provides a basic understanding of these challenges, introduces strategies and instruments for sustainable development.  **Contents**   1. Historical background and concepts : The UN process - from Stockholm to Johannesburg. Understanding sustainable development 2. Energy and Climate: Energy use and Climate change. Energy management strategies 3. Resources: Limits to Growth - How long will the World’s natural resources last? 4. Urbanisation: The sustainable city. 5. Production & Consumption: Consumption – sustainable use of products. 6. Life, Food and Fibres: The living world. Land and water. Agriculture and food. Forests and fibres. 7. Mobility: Means of mobility – technology and systems. Freight.Policies and management of mobility. 8. Welfare & Life Style: Social sustainability, happiness and the one-planet-life. 9. Politics: Making and implementing sustainable development politics. 10. Economics: Economy and ecology – a single system. The dilemma of economic growth. Tools for approaching a sustainable economy. 11. Change: The processes of individual change. Teaching sustainable development - A guide for teachers. Managing change |
| Tutorial |
| The students are given the tasks of making presentation and field exercise. These presentations can be made using the material Sustainable Development Course http://www2.balticuniv.uu.se/bup-3/introduction |

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| Basic literature | Sustainable Development Course  *http://www2.balticuniv.uu.se/bup-3/introduction* |
| Additional literature | Sörlin S., The road towards sustainability – a historical perspective, Uppsala University. 1997. 48p. ISBN 91-7005-124-0  Andersson H., Berg P.G., Community development – sustainable cities and habitation. Uppsala University, 1997. 56p. ISBN 91-7005-130-5  Rydén L., The foundations of sustainable development – ethics, law, culture and the physical boundaries. Uppsala University, 1997. 52p. ISBN 91-7005-132-1  Andersson M., From intention to action – implementing sustainable development. Uppsala University, 1997. 52p. ISBN 91-7005-133-X |

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| Teaching methods | | Discussions in class | |
| Assessment method | | | Learning outcome number |
| Assessment of the presentation | | | 03 |
| Written exam | | | 01, 02 |
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| Form and terms of an exam | Written exam. | | |